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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Robert T. Baum

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EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,649

Applicant(s)

BAUM ET AL

Examiner

Toan D. Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7-17 and 25-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11, 25-45 and 48-57 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 8, 12-17, 46 and 47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-3, 9-17, 25-45, and 48-57 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-27 and 39-71 of U.S. Patent No. 6,904,054. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application's claims 1-3, 9-17, 25-45, and 48-57 merely narrow the scope of U.S. Patent No. 6,904,054, claims 1-27 and 39-71 by adding a method of determining unused bandwidth on a common link of an access data network carrying subscriber traffic and over which a central content server located in a hub site and at least one local content server located in a central office communicate.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 7-8, 17, 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenwood et al. (US 5,568,181) in view of Johnson et al. (US 6,775,271).

For claims 1, 3, 7-8, and 17, Greenwood et al. disclose multimedia distribution over wide area network, comprising the steps:

determining unused bandwidth on a common link of an access data network carrying subscriber traffic (figure 3, reference 33) and over which the central content server (figure 1, reference 10) located in a hub site and the at least one local content

server (figure 1, reference 14) located in a central office communicate (col. 5 lines 29-34);

transmitting content data stored on the central content server (figure 1, reference 10) to the at least one local content server (figure 1, reference 14) substantially on the determined unused bandwidth (col. 5 lines 18-23); and

transmitting the content data stored on the at least one local content server (figure 1, reference 14) to at least one end user terminal (figure 1, reference 17) proximate to the at least one local content server (figure 1, reference 14) (col. 3 lines 15-20).

However, Greenwood et al. do not expressly disclose:

examining transmissions from the at least one end user terminal to distinguish transmission types;

forwarding each transmission of a first transmission type to a first network domain; and

forwarding each transmission of a second transmission type, different from the first transmission type, to a second network domain logically separate from the first network domain.

In an analogous art, Johnson et al. disclose:

examining transmissions from the at least one end user terminal to distinguish transmission types (col. 5 lines 1-11);

forwarding each transmission of a first transmission type to a first network domain (figure 1, reference 20, col. 4 lines 26-31); and

forwarding each transmission of a second transmission type, different from the first transmission type, to a second network domain logically separate from the first network domain (figure 1, reference 22, col. 4 lines 37-42).

Johnson et al. disclose further wherein the second network domain is located in a central office that provides Digital Subscriber Line (DSL) service (figure 1, reference 16) to the at least one end user terminal (figure 1, reference 12) (col. 2 lines 15-17, col. 3 lines 57-58 and col. 4 lines 3-7 as set forth in claim 3); transmitting the content data stored on the at least one second server (figure 1, reference 24) to a data switch (ATM switch means) proximate to the at least one second server (figure 1, reference 24, col. 7 lines 18-27 and col. 8 lines 39-42);

integrating the content data transmitted from the at least one second server (figure 1, reference 24) with other data destined to at least one end user terminal (figure 1, reference 12) received at the data switch via the common link (col. 7 lines 18-27); and

distributing the integrated data from the data switch to a link to equipment of the at least one end user terminal via a multiplexer (figure 7B, reference step 170, col. 5 lines 31-48, col. 12 lines 41-44 and col. 14 lines 40-41 as set forth in claim 7); wherein the multiplexer is a Digital Subscriber Line Access Multiplexer (DSLAM) (col. 5 lines 40-42 as set forth in claim 8); wherein the common link of the network also carries logical circuits for wide area data communications of a plurality of end user terminals (col. 4 lines 14-16 and col. 6 lines 1-5 as set forth in claim 17).

One skilled in the art would have recognized examining transmissions from the at least one end user terminal to distinguish transmission types, and would have applied Johnson et al.'s access switch in Greenwood et al.'s determining unused bandwidth. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Johnson et al.'s switching system and method for communicating information at a customer premises in Greenwood et al.'s multimedia distribution over wide area network with the motivation being to provide integrated audio, video, data, and other appropriate services to subscribers (col. 3 lines 42-44).

For claim 2, Greenwood et al. disclose wherein said at least one local content server (figure 1, references 14) comprises a server located in the second network (figure 1, reference 16) (col. 3 lines 20-23).

For claims 46-47, Greenwood et al. disclose multimedia distribution over wide area network, comprising the steps:

determining unused bandwidth on a common link of an access data network carrying subscriber traffic (figure 3, reference 33) and over which a central content server (figure 1, reference 10) located in a hub site and at least one local content server (figure 1, reference 14) located in a central office communicate (col. 5 lines 29-34);

transmitting content data stored on the central content server (figure 1, reference 10) to the at least one local content server (figure 1, reference 14) substantially on the determined unused bandwidth (col. 5 lines 18-23), the central content server and at least one local content server being part of a first network domain (col. 3 lines 9-15);

storing (figure 1, reference 11) the content data transmitted to the at least one local content server (figure 1, references 14) on the at least one local content server (col. 3 lines 15-17); and

transmitting the content data stored on the at least one local content server (figure 1, reference. 14) to at least one end user terminal (figure 1, reference 17) proximate to the at least one local content server (col. 3 lines 18-20).

However, Greenwood et al do not disclose wherein the step of transmitting the content data stored on the at least one local content server to the at least one end user terminal comprises the steps of:

transmitting the content data stored on the at least one local content server to a data switch proximate to the at least one local content server,

integrating the content data transmitted from the at least one local content server with other data received from a second network domain logically separate from the first network domain and destined to at least one end user terminal received at the data switch via the common link, and

distributing the integrated data from the data switch to a link to equipment of the at least one end user terminal via a multiplexer;

examining transmissions from the at least one end user terminal to distinguish transmission types;

forwarding each transmission of a first transmission type to a first network domain; and

forwarding each transmission of a second transmission type, different from the first transmission type, to a second network domain logically separate from the first network domain.

In an analogous art, Johnson et al. disclose wherein the step of transmitting the content data stored on the at least one local content server to the at least one end user terminal comprises the steps of:

transmitting the content data stored on the at least one local content server (figure 1, reference 24) to a data switch (ATM switch means) proximate to the at least one local content server (figure 1, reference 24, col. 7 lines 18-27 and col. 8 lines 39-42),

integrating the content data transmitted from the at least one local content server (figure 1, reference 24) with other data received from a second network domain logically separate from the first network domain and destined to at least one end user terminal (figure 1, reference 12) received at the data switch via the common link (col. 7 lines 18-27), and

distributing the integrated data from the data switch to a link to equipment of the at least one end user terminal via a multiplexer (figure 7B, reference step 170, col. 5 lines 31-48, col. 12 lines 4144 and col. 14 lines 40-41);

examining transmissions from the at least one end user terminal to distinguish transmission types (col. 5 lines 1-11);

forwarding each transmission of a first transmission type to a first network domain (figure 1, reference 20, col. 4 lines 26-31); and

forwarding each transmission of a second transmission type, different from the first transmission type, to a second network domain logically separate from the first network domain (figure 1, reference 22, col. 4 lines 37-42).

Johnson et al disclose wherein the multiplexer is a Digital Subscriber Line Access Multiplexer (DSLAM) (col. 5 lines 40-42 as set forth in claim 47).

One skilled in the art would have recognized transmitting the content data stored on the at least one local content server to a data switch proximate to the at least one local content server, and would have applied Johnson et al.'s access switch in Greenwood et al.'s determining unused bandwidth. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Johnson et al.'s switching system and method for communicating information at a customer premises in Greenwood et al.'s multimedia distribution over wide area network with the motivation being to provide Layer-2 switching functionality that is appropriate for a certain types of signals, such as voice signals, that are normally transported end-to-end by specific dedicated ATM switched virtual circuits (SVCs) or permanent virtual circuits (PVCs) (col. 5 lines 2-6).

6. Claims 12-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenwood et al (US 5,568,181) in view of Johnson et al. (US 6,775,271) further in view of Ghanwani et al (US 6,185,187).

For claims 12, 13 and 16, Greenwood et al. disclose wherein a part of the bandwidth of the common link is reserved for transmitting the content data stored on the

central content server (figure 1, reference 10) to the at least one local content server (figure 1, reference 14, col. 5 lines 18-23 and col. 5 lines 29-34).

However, Greenwood et al. in view of Johnson et al. do not expressly disclose to prevent the loss of a session between the central content server and the at least one local content server. In an analogous art, Ghanwani et al disclose to prevent the loss of a session between the central content server and the at least one local content server (col. 1 lines 43-48).

Ghanwani et al disclose the steps of determining unused bandwidth and transmitting content data utilize priority and queuing in at least one node of the access data network (col. 1 lines 28-54), to implement a minimum bandwidth (col. 5 lines 47-49) and provide additional bandwidth as available on the common link, for the transmitting of the content data over the common link (col. 1 lines 45-46 as set forth in claim 13); wherein the transmitting step utilizes an unspecified bit rate service through the common link (col. 1 lines 51-52 as set forth in claim 16).

One skilled in the art would have recognized prevent the loss of a session to use the teachings of Ghanwani et al in the system of Greenwood et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the prevent the loss of a session as taught by Ghanwani et al in Greenwood et al.'s system with the motivation being to conform to it ACR (col. 1 lines 47-48).

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenwood et al. (US 5,568,181) in view of Johnson et al. (US 6,775,271) further in view of Davies et al. (US 6,483, 805).

For claims 14 and 15, Greenwood et al. disclose wherein the steps of determining unused bandwidth and transmitting the content data (figure 3, col. 5 lines 18-34). However, Greenwood et al. in view of Johnson et al. do not expressly disclose implement a congestion mechanism to prevent data lost and utilize unused bandwidth. In an analogous art, Davies et al. disclose implement a congestion mechanism to prevent data lost and utilize unused bandwidth (col. 8 lines 53-61).

Davies et al. disclose wherein the congestion mechanism comprises Transmission Control Protocol (TCP) (col. 8 line 53 as set forth in claim 15).

One skilled in the art would have recognized a congestion mechanism to prevent data lost and utilize unused bandwidth to use the teachings of Davies et al. in the system of Greenwood et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the implement a congestion mechanism to prevent data lost and utilize unused bandwidth as taught by Davies et al. in Greenwood et al.'s system with the motivation being to achieve reliability a system of positive acknowledgements by the receiving station is used (col. 8 lines 48-52).

Allowable Subject Matter

8. Claim 9-11, 25-45 and 48-57 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding to claim 9, the prior art fails to teach a combination of the steps of:

Provisioning a logical communication circuit extending from the at least one end user terminal through the network to a communication access node coupled to a first network domain, at least a portion of the logical communication circuit extending

through the common link, wherein the provisioning comprises defining the logical communication circuit in terms of a layer-2 protocol defined switched connectivity through the network, in the specific combination as recite in claim 9.

Regarding to claim 25, the prior art fails to teach a combination of the steps of:
a logical communication circuit for content distribution between the central content server and the local content server provisioned through the access switch and the high-speed data link, the provisioning of the logical communication circuit for content distribution enabling communication of the content data between the communication access node and the access switch over bandwidth unused by traffic on the layer-2 protocol logical communication circuits, in the specific combination as recite in claim 25.

Regarding to claim 39, the prior art fails to teach a combination of the steps of:
a logical circuit between the central content server and the local content server for transport of content data between the servers, wherein provisioning associated with the logical circuit in the hub data switch or in the access switch allocates otherwise available bandwidth to the logical circuit within the high-speed data link between the access switch and the hub data switch when not otherwise used, in the specific combination as recite in claim 39.

Regarding to claim 48, the prior art fails to teach a combination of the steps of:
receiving second downstream transmissions intended for the at least one end user terminal from the second network domain at the data switch, content data from the at least one local content server; and

inserting the second downstream transmissions into the logical communication circuit, to combine the first and second downstream transmission for communication over the logical communication circuit from the data switch to the at least one end user terminal, in the specific combination as recite in claim 48.

Regarding to claim 50, the prior art fails to teach a combination of the steps of:
a logical communication circuit for content distribution between the central content server and the local content server provisioned through the access switch and the high-speed data link, the provisioning of the logical communication circuit for content distribution enabling communication of content data between the communication access node and the access switch over bandwidth unused by traffic on the layer-2 protocol logical communication circuits;

receiving second downstream transmissions intended for the one customer premises from the second network domain, wherein the content stored on the local content server is transmitted to the one customer premises over at least some of the second downstream transmission; and

insert the second downstream transmissions into the respective logical communication circuit, to combine the first and second downstream transmissions for transport via one of the digital subscriber line transceivers which serves the one customer premises, in the specific combination as recite in claim 50.

Regarding to claim 53, the prior art fails to teach a combination of the steps of:
a logical communication circuit for content distribution between the central content server and the local content server provisioned through the access switch and

the high-speed data link, the provisioning of the logical communication circuit for content distribution enabling communication of content data between the communication access node and the access switch over bandwidth unused by traffic on the layer-2 protocol logical communication circuits, wherein the first transmission type comprises a type of the local area network protocol adapted for internetwork service provider applications, in the specific combination as recite in claim 53.

Regarding to claim 55, the prior art fails to teach a combination of the steps of:

a logical communication circuit for content distribution between the central content server and the local content server provisioned through the access switch and the high-speed data link, the provisioning of the logical communication circuit for the content distribution enabling communication of the content data between the communication access node and the access switch over bandwidth unused by traffic on the layer-2 protocol logical communication circuits, wherein each provisioning of the logical communication circuit for the content distribution assigns unspecified bit rate service thereto with an associated minimum service guarantee, in the specific combination as recite in claim 55.

Regarding to claim 56, the prior art fails to teach a combination of the steps of :

a logical circuit between the central content server and the local content server for transport of content data between the servers, wherein provisioning associated with the logical circuit in the hub data switch or in the access switch allocates otherwise available bandwidth to the logical circuit within the high-speed data link between the

access switch and the hub data switch when not otherwise used by customer traffic, wherein the logical circuit comprises

at least one Asynchronous Transfer Mode (ATM) permanent virtual circuit (PVC), wherein the at least one ATM PVC is provisioned to provide a guaranteed minimum bandwidth in combination with unspecified bit rate service for the logical circuit within the high-speed data link, in the specific combination as recite in claim 56.

Regarding to claim 57, the prior art fails to teach a combination of the steps of a logical circuit between the central content server and the local content server for transport of content data between the servers, wherein provisioning associated with the logical circuit in the hub data switch or in the access switch allocates otherwise available bandwidth to the logical circuit within the high-speed data link between the access switch and the hub data switch when not otherwise used by customer traffic; the access switch extracts each detected transmission of a type other than the first transmission type from the respective logical communication circuit for routing to the vertical services network, in the specific combination as recite in claim 57.

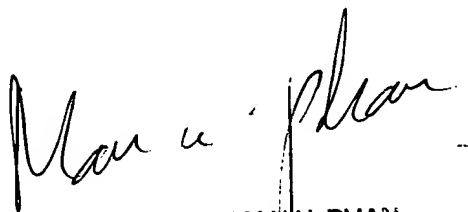
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2665

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN
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A handwritten signature in black ink, appearing to read "Man U. Phan", is written over a faint, dotted rectangular box.

MAN U. PHAN
PRIMARY EXAMINER